

What is claimed is:

1       1. An electronic checkout system comprising:

- 2                 1       (a) a tool box located in a tool storage room;
- 3                 2       (b) a plurality of tools stored in said tool box, each of
- 4                 3       said plurality of tools having a tool identification means
- 5                 4       imbedded therein, said tool identification means for each
- 6                 5       of said tools providing a radio frequency signal
- 7                 6       containing a digital tool identification code which
- 8                 7       operates as an identifier for each of said tools;
- 9                 8       (c) first reader means mounted on said tool box, said
- 10                9       first reader means being adapted to receive and read the
- 11               10      radio frequency signal provided by each of said tools to
- 12               11      determine when each of said tools is being removed from
- 13               12      said tool box by an authorized user, said first reader
- 14               13      means reading the radio frequency signal provided by each
- 15               14      of said tools and recording the digital tool
- 16               15      identification code for each of said tools which said
- 17               16      authorized user removed from said tool box;
- 18               17      (d) second reader means mounted on a wall adjacent an
- 19               18      exit to said tool storage room, said second reader means
- 20               19      being adapted to receive and read the radio frequency
- 21               20      signal for each of said tools to determine when each of
- 21      said tools is being removed from said tool storage room by

22           said authorized user, said second reader means reading the  
23           radio frequency signal provided by each of said tools and  
24           recording the digital tool identification code for each of  
25           said tools which said authorized user removed from said  
26           tool storage room;

27           (e) an employee identification badge having an employee  
28           identification means imbedded therein, said employee  
29           identification badge being worn by said authorized user to  
30           identify said user as an individual authorized to remove  
31           each of said tools from said tool box and said tool  
32           storage room, the employee identification means for said  
33           employee identification badge providing a radio frequency  
34           signal containing a digital employee identification code  
35           for said authorized user; and

36           (f) said first reader means and said second reader means  
37           reading the digital employee identification code for said  
38           employee identification badge to determine when the  
39           individual removing any one of said tools from said tool  
40           box and said tool storage room is said authorized user.

1           2. The electronic checkout system of claim 1 wherein the tool  
2           identification means for each of said tools and the employee  
3           identification means for said employee identification badge

4 operate at a frequency of 13.56 MHz and provides for read  
5 distances of approximately five feet.

1 3. The electronic checkout system of claim 1 wherein the tool  
2 identification means for each of said tools and the employee  
3 identification means for said employee identification badge  
4 operate at a frequency of 2.46 GHz and provides for read  
5 distances of approximately ten feet.

1 4. The electronic checkout system of claim 1 wherein said  
2 second reader means includes a recorder connected thereto, said  
3 recorder recording the digital tool identification code for  
4 each of said tools which has been removed from said tool  
5 storage room by said authorized user.

1 5. The electronic checkout system of claim 1 wherein said  
2 second reader means includes an alarm which is activated  
3 whenever an unauthorized individual removes one tool of said  
4 plurality of tools from said tool storage room.

1 6. The electronic checkout system of claim 1 further comprising  
2 a wrist band worn by said authorized user, said wrist band  
3 having employee identification means imbedded therein, said

4       wrist band badge being worn by said authorized user to identify  
5       said user as the individual authorized to remove each of said  
6       tools from said tool box and said tool storage room, the  
7       employee identification means for said wrist band providing a  
8       radio frequency signal containing said digital employee  
9       identification code for said authorized user.

1       7. The electronic checkout system of claim 1 wherein said  
2       plurality of tools stored in said tool box comprises screw  
3       drivers, pliers, wrenches, metal cutting saws, wire strippers  
4       wire cutters, electric drills, electric bandsaws, and specialty  
5       tools.

1       8. An electronic checkout system comprising:  
2               (a) a tool box located in a tool storage room;  
3               (b) a plurality of tools stored in said tool box, each of  
4               said plurality of tools having a radio frequency  
5               identification (RFID) device imbedded therein, said radio  
6               frequency identification device for each of said tools  
7               operating as an identifier for each of said tools;  
8               (c) a first RFID reader mounted on said tool box, said  
9               first RFID reader being adapted to read the radio

frequency identification device for each of said tools to determine when each of said tools is being removed from said tool box by an authorized user, said first RFID reader reading and recording the radio frequency identification device for each of said tools which said authorized user removed from said tool box;

(d) a second RFID reader mounted on a wall adjacent an exit to said tool storage room, said second RFID reader being adapted to read the radio frequency identification device for each of said tools to determine when each of said tools is being removed from said tool storage room by said authorized user, said second RFID reader reading and recording the radio frequency identification device for each of said tools which has been removed from said tool storage room by said authorized user;

(e) an employee identification badge having a radio frequency identification device imbedded therein, said employee identification badge being worn by said authorized user to identify said user as an individual authorized to remove each of said tools from said tool box and said tool storage room; and

(f) said first RFID reader and said second RFID reader reading the radio frequency identification device for said

33           employee identification badge to determine when the  
34           individual removing any one of said tools from said tool  
35           box and said tool storage room is said authorized user.

1           9. The electronic checkout system of claim 8 wherein the radio  
2           frequency identification device for each of said tools and the  
3           radio frequency identification device for said employee  
4           identification badge operate at a frequency of 13.56 MHz and  
5           provides for read distances of approximately five feet.

1           10. The electronic checkout system of claim 8 wherein the radio  
2           frequency identification device for each of said tools and the  
3           radio frequency identification device for said employee  
4           identification badge operate at a frequency of 2.46 GHz and  
5           provides for read distances of approximately ten feet.

1           11. The electronic checkout system of claim 8 wherein said  
2           second RFID reader includes a recorder connected thereto, said  
3           recorder recording the radio frequency identification device  
4           for each of said tools which has been removed from said tool  
5           storage room by said authorized user.

1           12. The electronic checkout system of claim 8 wherein said

2 second RFID reader includes an alarm which is activated  
3 whenever an unauthorized individual removes one tool of said  
4 plurality of tools from said tool storage room.

1 13. The electronic checkout system of claim 8 further  
2 comprising a wrist band worn by said authorized user, said  
3 wrist band having a radio frequency identification device  
4 imbedded therein, said wrist band badge being worn by said  
5 authorized user to identify said user as the individual  
6 authorized to remove each of said tools from said tool box and  
7 said tool storage room.

1 14. The electronic checkout system of claim 8 wherein said  
2 first RFID reader has a sensor element, a keypad and a display  
3 wherein said sensor element is adapted to receive radio  
4 frequency signals transmitted by the radio frequency  
5 identification device for each of said tools, said keypad  
6 allows said authorized user to enter additional information  
7 into said first RFID reader relating to each of said tools said  
8 authorized user removes from said tool box, and said display  
9 allows said authorized user to read said additional information  
10 the authorized user entered into said first RFID reader.

1       15. The electronic checkout system of claim 8 wherein said  
2       second RFID reader has a sensor element, a keypad and a display  
3       wherein said sensor element is adapted to receive radio  
4       frequency signals transmitted by the radio frequency  
5       identification device for each of said tools, said keypad  
6       allows said authorized user to enter additional information  
7       into said second RFID reader relating to each of said tools  
8       said authorized user removes from said tool storage room, and  
9       said display allows said authorized user to read said  
10      additional information the authorized user entered into said  
11      second RFID reader.

1       16. The electronic checkout system of claim 8 wherein said  
2       plurality of tools stored in said tool box comprises screw  
3       drivers, pliers, wrenches, metal cutting saws, wire strippers  
4       wire cutters, electric drills, electric bandsaws, and specialty  
5       tools.

1       17. The electronic checkout system of claim 8 further  
2       comprising:  
3           (a) a wireless link having an antenna, said wireless link being  
4       connected to a network which includes said second RFID reader  
5       adjacent the exit to said tool storage room;

6           (b) a remote toolbox which transmits information via radio  
7           frequency signals to the antenna of said wireless link relating  
8           to portable tools removed from said remote tool box by said  
9           authorized user; and

10          (c) a database connected to said network, said database  
11          including a list of employees authorized to remove said  
12          portable tools from said remote toolbox and to remove said  
13          tools from said tool box located in said tool storage room.

1           18. The electronic checkout system of claim 17 further  
2           comprising at least one additional tool box located in said  
3           tool storage room.

1           19. An electronic checkout system comprising:

2           (a) a tool box located in a tool storage room;  
3           (b) a plurality of tools stored in said tool box, each of  
4           said plurality of tools having a tool identification  
5           device imbedded therein, said tool identification device  
6           for each of said tools providing a radio frequency signal  
7           containing a digital tool identification code which  
8           operates as an identifier for each of said tools;  
9           (c) a first RFID reader mounted on said tool box, said  
10          first RFID reader being adapted to receive and read the

11           radio frequency signal provided by each of said tools to  
12           determine when each of said tools is being removed from  
13           said tool box by an authorized user, said first RFID  
14           reader reading the radio frequency signal provided by each  
15           of said tools and recording the digital tool  
16           identification code for each of said tools which said  
17           authorized user removed from said tool box;  
18           (d) second RFID reader mounted on a wall adjacent an  
19           exit to said tool storage room, said second RFID reader  
20           being adapted to receive and read the radio frequency  
21           signal for each of said tools to determine when each of  
22           said tools is being removed from said tool storage room by  
23           said authorized user, said second RFID reader reading the  
24           radio frequency signal provided by each of said tools and  
25           recording the digital tool identification code for each of  
26           said tools which said authorized user removed from said  
27           tool storage room;  
28           (e) an employee identification badge having an employee  
29           identification device imbedded therein, said employee  
30           identification badge being worn by said authorized user to  
31           identify said user as an individual authorized to remove  
32           each of said tools from said tool box and said tool  
33           storage room, the employee identification device for said

34 employee identification badge providing a radio frequency  
35 signal containing a digital employee identification code  
36 for said authorized user;

37 (f) said first RFID reader and said second RFID reader  
38 reading the digital employee identification code for said  
39 employee identification badge to determine when the  
40 individual removing any one of said tools from said tool  
41 box and said tool storage room is said authorized user;  
42 and

43 (g) said tool identifcation device for each of said tools  
44 and said employee identifcation device for said employee  
45 identification badge each comprising a radio frequency  
46 identification device selected from the group of radio  
47 frequency identification devices consisitng of (a) a first  
48 RFID device operating at a frequency of 13.56 MHz and  
49 providing for read distances of approximately five feet,  
50 and (b) a second RFID device operating at a frequency of  
51 2.46 GHz and providing for read distances of approximately  
52 ten feet.

1           20. The electronic checkout system of claim 19 further  
2 comprising a wrist band worn by said authorized user, said  
3 wrist band having a radio frequency identification device

4 imbedded therein, said wrist band badge being worn by said  
5 authorized user to identify said user as the individual  
6 authorized to remove each of said tools from said tool box and  
7 said tool storage room.